

WHAT IS CLAIMED IS:

1. A method comprising:
applying a first magnetic field to a magneto resistive memory cell; and
applying a second magnetic field to the magneto resistive memory cell;
wherein the first magnetic field failed to write a desired value to the magneto
resistive memory cell and wherein the second magnetic field is stronger
than the first magnetic field.
2. The method, as recited in Claim 1:
wherein applying the first magnetic field comprises applying a first current pulse
having a first current level to a strip line of the magneto resistive memory
cell;
wherein applying the second magnetic field comprises applying a second current
pulse having a second current level to the strip line of the magneto
resistive memory cell; and
wherein the second current level is higher than the first current level.
3. The method, as recited in Claim 2, wherein the first current level is less than
six sigma above a mean switching current.
4. The method, as recited in Claim 2, wherein the first current level is less than a
current level necessary to switch every stored value in a plurality of magneto resistive
memory cells.
5. The method, as recited in Claim 2, wherein the strip line is a digit line for a
plurality of magneto resistive memory cells.
6. The method, as recited in Claim 2, wherein the strip line is a row line for a
plurality of magneto resistive memory cells.

7. The method, as recited in Claim 2, wherein the strip line is a bit line for a plurality of magneto resistive memory cells.

8. The method, as recited in Claim 2, wherein the strip line is a column line for a plurality of magneto resistive memory cells.

9. The method, as recited in Claim 1, further comprising:
performing a read of the magneto resistive memory cell to determine the stored value prior to applying the first magnetic field; and
performing another read of the magneto resistive memory cell after applying the first magnetic field.

10. The method, as recited in Claim 9, wherein the applying the first magnetic field occurs only if the stored value is not in a desired state.

11. The method, as recited in Claim 1, wherein applying the first magnetic field occurs during system test, the method further comprising:
determining that the first magnetic field is not sufficient to reliably write the desired value; and
storing a result of the determination such that subsequent applications of magnetic fields to the magneto resistive memory cell utilize a force level of the second magnetic field.

12. The method, as recited in Claim 11, wherein storing the result comprises setting a fuse.

13. The method, as recited in Claim 11, wherein storing the result comprises setting a memory bit.

14. The method, as recited in Claim 11, wherein storing the result comprises damaging a memory bit.

15. The method, as recited in Claim 11, wherein the subsequent applications of magnetic fields are applied to a row of magneto resistive memory cells.

16. The method, as recited in Claim 11, wherein the subsequent applications of magnetic fields are applied to a column of magneto resistive memory cells.

17. The method, as recited in Claim 1, wherein a structure of the magneto resistive memory cell structure comprises a magneto resistive memory element adjacent to a bit strip line and a digit strip line; and wherein applying current pulses to at least one of the word strip line and the digit strip line causes a value to be stored in the magneto resistive memory cell.

18. The method, as recited in Claim 1, wherein the magneto resistive memory cell is one of a plurality of magneto resistive memory cells arrayed with a plurality of rows and a plurality of columns.

19. The method, as recited in Claim 1, wherein applying a first magnetic field comprises a toggle write mode.

20. The method, as recited in Claim 1, wherein applying a first magnetic field comprises a direct write mode.

21. The method, as recited in Claim 1, wherein applying a first magnetic field comprises a conventional write mode.

22. A method comprising:
applying a first magnetic field to a plurality of magneto resistive memory cells;
and
applying a second magnetic field to select ones of the plurality of magneto resistive memory cells;
wherein the first magnetic field failed to write a desired value to at least one stored value in the select ones of the magneto resistive memory cells and
wherein the second magnetic field is stronger than the first magnetic field.

23. The method, as recited in Claim 22, wherein the plurality of magneto resistive memory cells are arranged in an array and the select ones of the plurality of magneto resistive memory cells are a row of the array.

24. The method, as recited in Claim 23, wherein the first magnetic field has a force less than a magnetic field necessary to reliably write the plurality of magneto resistive memory cells.

25. The method, as recited in Claim 22, wherein applying the first magnetic field occurs during system test, the method further comprising:
determining that the first magnetic field is not sufficient to reliably write at least one of the plurality of memory cells; and
storing a result of the determination such that subsequent applications of magnetic fields to the select ones of the plurality of magneto resistive memory cells utilize a force level of the second magnetic field.

26. The method, as recited in Claim 25, wherein storing the result comprises setting a fuse.

27. The method, as recited in Claim 25, wherein storing the result comprises setting a memory bit.

28. The method, as recited in Claim 25, wherein storing the result comprises damaging a memory bit.

29. The method, as recited in Claim 25, wherein the subsequent applications of magnetic fields are applied to a row of the plurality of magneto resistive memory cells.

30. The method, as recited in Claim 29, wherein the subsequent applications of magnetic fields are applied to a column of the plurality of magneto resistive memory cells.

31. The method, as recited in Claim 25, wherein the subsequent applications of magnetic fields are applied to a column of the plurality of magneto resistive memory cells.

32. A magneto resistive memory unit comprising:
a plurality of digit strip lines;
a plurality of word strip lines;
a plurality of magneto resistive memory cells arranged in an array; and
a plurality of storage units configured to store information regarding a force level
of a plurality of magnetic fields to be applied to the plurality of magneto
resistive memory cells.

33. The magneto resistive memory unit, as recited in Claim 32, wherein the plurality of storage units identify a first magnetic field having a first force to be applied to select ones of the plurality of magneto resistive memory cells or a second magnetic field having a second force to be applied to other select ones of the plurality of magneto resistive memory cells; wherein the first force is less than the second force.

34. An apparatus comprising:

means for applying a first magnetic field to a magneto resistive memory cell; and
means for applying a second magnetic field to the magneto resistive memory cell;
wherein the means for applying the first magnetic field failed to write a desired
value to the magneto resistive memory cell and wherein the second
magnetic field is stronger than the first magnetic field.

35. The apparatus, as recited in Claim 34:

wherein the means for applying the first magnetic field comprises means for
applying a first current pulse having a first current level to a strip line of
the magneto resistive memory cell;
wherein the means for applying the second magnetic field comprises means for
applying a second current pulse having a second current level to the strip
line of the magneto resistive memory cell; and
wherein the second current level is higher than the first current level.

36. The apparatus, as recited in Claim 34:

wherein the means for applying the first magnetic field comprises means for
applying a first current pulse having a first current level to a strip line of
the magneto resistive memory cell;